

REMARKS

Claim 11 has been amended to reinsert the word "recombinant" in the claim to bring the claim back into the form it was in before the previous amendment.

Claims 11-17, 22, 24, 25, 26, 27, 30 and 31 were rejected as anticipated by Sarngadharan *et al.* (U.S. Pat. No. 5,122,468) as evidenced by the product information found in the Advanced Bioscience Catalog. This patent describes purification of gp160 from a HUT78 T-cell clone (6D5) infected with HIV-1₄₅₁. However, the patent does not describe the protein as a trimer nor as containing interchain disulfide bonds. Rather, the rejection relies on the Catalog description of an HIV-1₄₅₁ gp160 protein obtained from a medium of HIV-1₄₅₁-infected cells as being mostly trimers and dimers. And because naturally occurring gp160 trimers are known not to contain inter-chain disulfide linkages, the Office Action concludes that the gp160 of the '468 patent must be a trimer not containing interchain disulfide linkages. The applicants respectfully disagree.

The Office Action presumes that the Catalog describes the gp160 of the '468 patent. But this is incorrect. The Catalog describes the HIV-1₄₅₁ gp160 protein merely as coming from HIV-1₄₅₁ infected cells, but does not otherwise identify the cells. By contrast, the first page of the Catalog excerpt expressly describes the HIV-1_{III_B} gp120 protein and the HIV-1₄₅₁ gp120 protein as coming from infected the 6D5 clone of HUT78 cells, the same cells as in the '468 patent. Consequently, one cannot state with any degree of certainty that the HIV-1₄₅₁ gp160 described in the Catalog is the same as described in the '468 patent and so cannot have a reasonable degree of certainty that the gp160 of the '468 patent is a trimer. Thus, the '468 patent cannot anticipate the present claims.

Furthermore, claim 11 has been amended to its original form to recite a "recombinant" trimer of HIV gp160, further differentiating the claimed compositions from the cited art.

In addition, several of the claims contain limitations not found in the '468 patent:

- a) claim 12 – gp160 comprising a gp41 and a gp120 from different HIV strains;
- b) claim 13 – HIV gp160 wherein all or a portion of the gp160 transmembrane region is deleted; and

- c) claim 22 (and those depending from it) – HIV gp160 comprising a gp41 fragment essential for trimer formation and an immunogenic fragment of gp120.

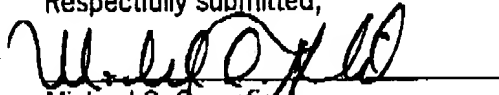
Accordingly, for this reason alone these claims are not anticipated by the '468 patent.

Finally, in the Examiner's Interview Summary the Examiner wrote that in response to the question of how the then-claimed composition differed from nature the applicant indicated that gp160 had been purified. The applicant wishes to clarify that that statement should not be construed as an assertion or admission that purity is necessarily the only difference between the claimed composition and naturally-occurring gp160.

In view of the foregoing, the Applicants respectfully request reconsideration and withdrawal of this rejection. If there are any questions or comments regarding this Response or application, the Examiner is encouraged to contact the undersigned attorney as indicated below.

Date: July 3, 2003

Respectfully submitted,



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